

App1. No.: 09/844,947  
Amdt. Dated: March 10, 2005  
Reply to Office Action of: January 25, 2005

#### REMARKS AND ARGUMENTS

Claims 1, 2, 4-9, 13, 15, 20, 21, 23 and 24 remain in this application. Claim 1 has been amended herein (2<sup>nd</sup> amendment). Claim 1 is the only independent claim in the application. Claims 2, 4-9, 13, 15, 20, 21, 23 and 24 depend from claims 1 either directly or indirectly.

Claims 1, 2, 4-9, 13, 15, 20, 21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackwell et al (5,152,819) in view of Nakahara et al (4,419,116), Koide et al (5,425,795) or Terashima et al (5,423,898) and Roba et al (6,672,110). Applicants traverse the rejection.

Blackwell is cited for teaching generating vapors and passing the vapors through a burner flame to form particles of soot that are deposited on a mandrel or bait. However, Blackwell teaches the use of a single delivery system for the materials that are to be burned in a burner to form the soot (see Blackwell, Figure 1). In Blackwell the materials are mixed in a single vessel and a sparging gas passed through the vessel to transport the materials to the burners (see Figure 1 and column 7, line 38 *et seq.*). In contrast, applicants' claim 1, as currently amended, teaches use of separate delivery systems for the silica-forming and titania-forming materials that are used to make the silica-titania glass of the invention. The silica-forming and titania-forming materials are delivered to a manifold where they are mixed just prior to being burned to form the soot. Since Blackwell is silent on the use of a dual delivery system, applicants submit that Blackwell does not teach or suggest the claimed invention.

Roba is cited, in combination with Blackwell, for teaching the formation of a titania containing soot. However, in Roba *it is essential* that water be supplied as a gaseous material to hydrolyze the glass forming materials (see Roba, Abstract; column 2, lines 65-67; and column 4, lines 56-61). Further, in column 2, lines 39-54, Roba clearly indicates that his method is a hydrolysis method and that it is flame-free (see column 2, lines 48059 regarding flame-free). In contrast to Roba, applicants' invention does not require that water vapor be supplied as a reactant. In fact, nowhere in applicant's specification is the supply of water vapor mentioned. Further, applicants' invention is a flame method. Consequently, applicants submit that the invention as claimed is not taught or suggested by Roba or a combination of Blackwell and Roba.

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Kiode, Nakahara and Terashima are cited by the Examiner as teaching translating the deposition surface away from the burner. While these references may so teach, the combination of these references with Blackwell or Blackwell/Roba does not teach or suggest the claimed invention for the reasons given in detail in the foregoing paragraphs. Roba teach a hydrolysis deposition method, not a flame deposition method. Blackwell does not teach the use of separate delivery systems for the silica and titania precursor materials.

Therefore, in view of the foregoing facts and arguments, applicants respectfully submit that the invention as now claimed is not taught or suggested by the art cited, with alone or in combination. Consequently, applicants respectfully submit that it is proper for the Examiner to withdraw the §103(a) rejection of claims 1, 2, 4-9, 13, 15, 20, 21, 23 and 24.

Applicant believes that no extension of time is necessary to make this Reply timely. Should applicants be in error, applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Walter M. Douglas at (607) 974-2431.

11 March 2005  
Date

<b>CERTIFICATE OF TRANSMISSION</b> <u>UNDER 37 C.F.R. § 1.8</u>	
I hereby certify that this paper and any papers referred to herein are being transmitted by facsimile to the U.S. Patent and Trademark Office at 703-872-9306 on:	
<u>11 March 2005</u> Date	
<u>Walter M. Douglas</u> Walter M. Douglas	<u>11 March 2005</u> Date

Respectfully submitted,  
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